INTERFACE SERIES

Installation & Operation Instructions

TOB

Phone: 1-888-967-5224
Website: workaci.com

GENERAL INFORMATION

The TOB will accept up to two separate signals from up to two AC TRIAC outputs, or DC sources, and provide up to two TRIAC outputs each capable of driving a 2.5A load. Each output TRIAC is activated for the time that the signal is applied to the input. The TOB provides isolation between the input and output circuits as well as the two identical circuits.

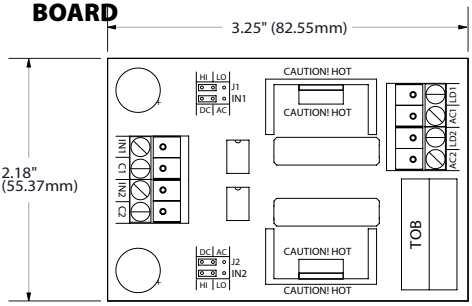
MOUNTING INSTRUCTIONS

Ground yourself to discharge static electricity before touching any electronic equipment, as some components are static sensitive.

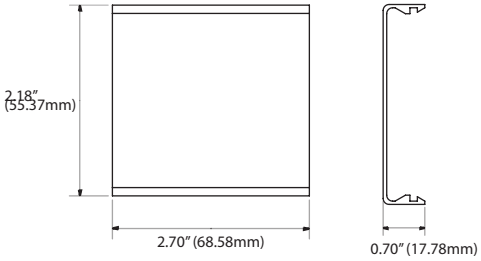
Circuit board may be mounted in any position. If circuit board slides out of snap track, a nonconductive "stop" may be required. Use only fingers to remove board from snap track. Slide out of snap track or push against side of snap track and lift that side of the circuit board to remove. **Don't flex board. Use no tools.**

FIGURE 1: DIMENSIONS

BOARD



SNAP TRACK



WIRING INSTRUCTIONS

PRECAUTIONS

- **Remove power before wiring. Never connect or disconnect wiring with power applied.**
- **When using a shielded cable, ground the shield only at the controller end. Grounding both ends can cause a ground loop.**
- **It is recommended you use an isolated UL-listed class 2 transformer when powering the unit with 24 VAC. Failure to wire the devices with the correct polarity when sharing transformers may result in damage to any device powered by the shared transformer.**
- **If the 24 VDC or 24VAC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, DC/AC Transorb, Transient Voltage Suppressor (ACI Part: 142583), or diode placed across the coil or inductor. The cathode, or banded side of the DC Transorb or diode, connects to the positive side of the power supply. Without these snubbers, coils produce very large voltage spikes when de-energizing that can cause malfunction or destruction of electronic circuits.**
- **All wiring must comply with all local and National Electric Codes.**

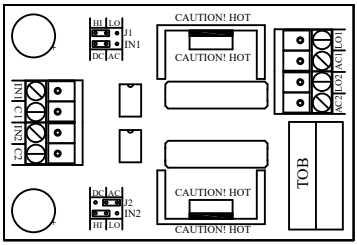
Input Wiring

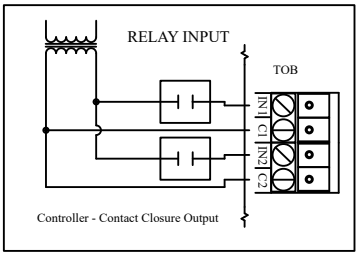
Either of the two inputs can be wired as an AC or DC input. See "AC In" and "DC In" diagrams below. Observe the J1 and J2 AC/DC jumper shunt settings on page 2.

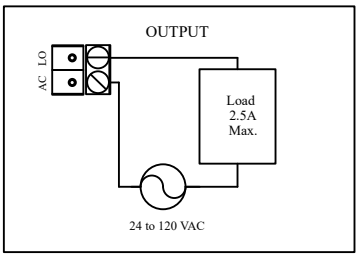
Automation Components, Inc.
2305 Pleasant View Road | Middleton, WI 53562
Phone: 1-888-967-5224 | **Website:** workaci.com

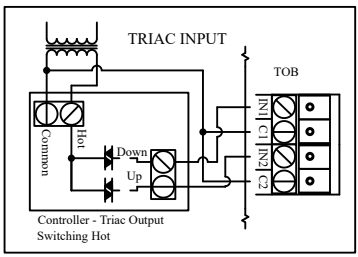
Version: 2.0
I0000471

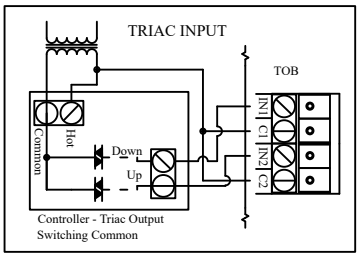
FIGURE 2: WIRING











Input Wiring *(Continued)*

Non TRIAC driven AC signal wiring is wired similar to the direct DC input with a N.O. contact activating the signal. See the "Input Jumper Shunt Settings" section below to configure it for your input type.

Output Wiring

Either output can drive a 2.5A load at 120 VAC or 24 VAC. In either case a 2.5A load should not be exceeded. Maximum load is 300VA for 120 VAC and 60VA for 24 VAC.

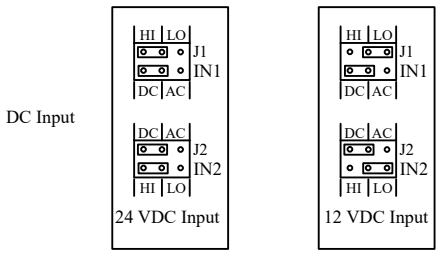
Input Type Jumper Shunt Settings (AC/DC)

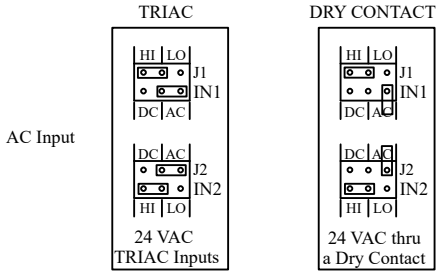
The AC/DC sides of the J1 or J2 headers are available so that you can set each type of input you are using to trigger the TRIAC Output. If you are using an AC signal from a TRIAC, place the jumper shunt in the "AC" position. If you are using a DC signal, place the jumper shunt in the "DC" position. If you are using an AC signal that is being switched with a dry contact, do not place a jumper shunt in either position (remove entirely).

Input Level (HI/LO)

The HI/LO sides of the J1 or J2 headers are to set the level of the input that you are using. Follow the table below for the setting that you need.

Input Type	High (HI)	Low (LO)
AC (TRIAC)	>20 VAC up to 26 VAC	
DC	>20 VDC up to 35 VDC	5 VDC to 20 VDC
AC (NON-TRIAC)	>20 VAC up to 28 VAC	





Automation Components, Inc.
2305 Pleasant View Road | Middleton, WI 53562
Phone: 1-888-967-5224 | **Website:** workaci.com

Version: 2.0
I0000471

Note: Be aware that the J1 and J2 jumpers are a mirror image of each other. This means that the HI/LO jumper settings are closest to the outside edge of the board.

Be aware that the AC low settings should not be used.

Input Common Jumper J5

If the Input types are the same and they share the same common for both IN1 and IN2, on the bottom side of the board "Solder Jumper J5" can be soldered shut in order to minimize wiring to both C1 and C2 terminals. Doing so makes a connection on the solder side of the board between C1 and C2 terminals. Use caution not to damage other solder connections or components.

PRODUCT SPECIFICATIONS

NON-SPECIFIC INFORMATION	
Input Type (AC (TRIAC) High):	>20 to 26 VAC | Impedance (Nom): 414Ω
Input Type (DC High):	>20 to 35 VDC | Impedance (Nom): 2.5KΩ
Input Type (AC (NON-TRIAC) High):	>20 to 28 VAC | Impedance (Nom): 414Ω
Input Type (DC Low):	5 to 20 VDC | Impedance (Nom): 1.25KΩ
Triac (Two Channels) Output:	24-120 VAC, 2.5A load max at 24 VAC (equivalent of a 60 VA load) or 120 VAC (equivalent of a 300 VA load)
Triac Voltage Drop:	1.2 VAC (nominal)
Isolation:	Electrical isolation from input to output and between circuits up to 7500 VAC peak
Operating Temperature Range:	35 to 120°F (1.7 to 48.9°C)
Operating Humidity Range:	10 to 95% non-condensing
Connections:	90° Pluggable Screw Terminal Blocks
Wire Size:	16 (1.31 mm²) to 26 AWG (0.129 mm²)
Terminal Block Torque Rating:	0.5 Nm (Minimum); 0.6 Nm (Maximum)
Storage Temperature:	-10 to 150°F (-23.3 to 65.5°C)
Snaptrack Material:	Polyvinyl Chloride (PVC)
Snaptrack Flammability Rating:	UL94 V-0
Product Dimensions:	(L) 3.25" (W) 2.18" (H) 1.70" (82.55 x 55.37 x 43.18 mm)
Product Weight:	0.22 lbs. (0.099 Kg)
Agency Approvals:	RoHS2, WEEE

WARRANTY

The TOB Series is covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's website: www.workaci.com.

Automation Components, Inc.
2305 Pleasant View Road | Middleton, WI 53562
Phone: 1-888-967-5224 | **Website:** workaci.com

Version: 2.0
I0000471

NOTES

Automation Components, Inc.
2305 Pleasant View Road
Middleton, WI 53562
Phone: 1-888-967-5224
Website: workaci.com